"Magnets"

Teacher's Guide

Assessment: Students are asked to demonstrate their understanding of the properties of magnets and investigate how a group of materials react to a magnet.

Materials: Assessment sheets, one magnet for each child, a pencil, and a baggie of materials: rubber band, paper clip, marble, nail, chalk, twist tie, fasteners, coin, eraser, and scissors

Teacher Directions: Students should complete the first two pages of the assessment before they are given any materials. After completing page two, a baggy of materials should be given to each child. Ask children to predict whether or not the material will be attracted to the magnet.

Students should record their predictions.

After predictions are recorded, students should be given a magnet to test their predictions. Students need to record their findings. Students are then asked to interpret their data by writing down three things that were attracted and three that were not attracted to the magnet.

Standards

VT Grade Level Expectations for Inquiry (grades 1 and 2)

- Use prior knowledge, experience and/or evidence to logically predict what may happen and explains why.
- Record observations of similarities and differences.
- Draw scientifically:
    - Records relative proportion (i.e.: eyes are approximately the right size when compared to the head), includes focus on finer details, and differentiates all parts observed.
    - Labels significant aspects of a scientific drawing or diagram with words provided.

VT Framework:
7.12 f.
NSES: Physical Science (K-4) Light, Heat, Electricity, and Magnetism PS 3.4
Grade Expectations:

S :2 Scientific Inquiry-Prediction
S :4 Scientific Inquiry – Conduct Experiment
S :5 Scientific Inquiry - Represent Data
S :7 Scientific Inquiry - Explain Data
S :25 Physical Science- Magnetic Force

Score Guide

1. Draw a magnet. Label the two poles (N and S)

Key Elements:

- Draws a magnet with opposite ends or sides labeled north and south.

2. Circle the picture that shows the only time that magnets **attract** each other.
Key Elements:

- Circles the pair of magnets with the north and south poles next to one another and explains that opposite poles attract.

3. Circle the picture that shows when magnets **repel** each other.
Key Elements:

- Circles the pair of magnets with the south poles next to one another and explains that similar poles repel.

4. Look at the chart on the next page. Which objects on the chart will a magnet attract? Make your predictions on the chart.
Key Elements:

- Makes a prediction (yes or no) for each item.

5. After you make your predictions, work like a scientist and test the materials with a magnet. Record your results on the chart.
Key Elements:

- Accurately records whether or not the item was attracted to the magnet.

6. Look at your chart. Draw and label 3 things from your chart that are attracted to a magnet.
Key Elements:

- Accurately records three items that were attracted to the magnet.

7. Look at your chart. Draw and label 3 things from your chart that are **not** attracted to a magnet.
Key Elements:

- Accurately records three items that were NOT attracted to the magnet.

8. Based on your work with magnets, tell the toy company how the objects that magnets attract are alike?
Key Elements:

- Indicates metal as a common characteristic of items attracted to the magnet.